

Food Products and Technology

Course Description

This course is an in-depth study of the development of food products from a variety of agricultural industries. Students will study the nutritional value of foods along with applying scientific processes such as microbiology and chemistry to the development of food products, and analyze and select appropriate storage, distribution and consumption of foods. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Course Code: 014001

Endorsements to

teach: AFNR

Programs of Study to which this Course applies:

Food Products and Processing Systems

Food Products and Processing Systems Plus

AFNR.HS.4.3	
Apply principles of nutrition, biology, microbiology, and chemistry to the development of food products.	
AFNR.HS.4.3.a	Research the nutritional needs of humans at various life stages/activity levels.
AFNR.HS.4.3.b	Explain how the chemistry of a food product ingredient affects the nutrition, processing and characteristics of a final food product.
AFNR.HS.4.3.c	Interpret how the physics of a food product ingredient affects the nutrition, processing and characteristics of a final food product.
AFNR.HS.4.3.d	Describe how the microbiology of a food product ingredient affects the nutrition, processing and characteristics of a final food product.
AFNR.HS.4.3.e	Design a new food product.
AFNR.HS.4.4	
Select and process food products for storage, distribution and consumption.	
AFNR.HS.4.4.a	Analyze the fruit industry from harvest to table.
AFNR.HS.4.4.b	Analyze the vegetable industry from harvest to table.
AFNR.HS.4.4.c	Analyze the food grain industry from harvest to table.
AFNR.HS.4.4.d	Analyze the protein industry from harvest to table.
AFNR.HS.4.4.e	Analyze the dairy industry from the farm to the table.
AFNR.HS.CR.1	
Describe career opportunities and means to achieve those opportunities in each of the AFNR career pathways.	
AFNR.HS.CR.1.a	Evaluate and implement the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.CR.1.b	Examine and choose career opportunities that are matched to personal life skills, talents, and career goals in an AFNR pathway of interest.
AFNR.HS.CR.2	
Demonstrate employability skills for college and career readiness.	
AFNR.HS.CR.2.a	Model personal responsibility in the workplace and community.
AFNR.HS.CR.2.d	Synthesize information, knowledge and experience to generate original ideal and challenge assumptions in the workplace and community.
AFNR.HS.CR.2.e	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.CR.2.f	Investigate, prioritize and select solutions to solve problems in the workplace community.
AFNR.HS.CR.2.g	Contribute to team-oriented projects and builds consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.CR.3	
Identify and demonstrate personal financial management and planning.	
AFNR.HS.CR.3.a	Design and implement a personal financial management plan.
AFNR.HS.CR.4	
Identify and demonstrate workplace safety.	
AFNR.HS.CR.4.a	Identify and explain the implication of required regulations to maintain and improve safety, health and environments management systems.
AFNR.HS.CR.4.b	Apply health and safety practices to AFNR workplaces.

AFNR.HS.CR.4.c	Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.
AFNR.HS.CR.5	
Evaluate the nature and scope of the AFNR Career Cluster and the role of agriculture, food and natural resources (AFNR) in society and the economy.	
AFNR.HS.CR.5.b	Identify public policies and examine their impact on AFNR systems.
AFNR.HS.CR.5.c	Examine the components of the AFNR systems and assess their impact on the local, state, national and global society and economy.
AFNR.HS.CR.6	
Identify and demonstrate leadership skills and traits in demand of leadership roles in the agriculture industry.	
AFNR.HS.CR.6.b	Craft SMART goals to achieve by the end of a specific agricultural education course.
AFNR.HS.CR.6.c	Write a career objective.
AFNR.HS.CR.6.f	Write and deliver a speech focused on a currently controversial topic within the agricultural industry while arguing both points of view.